

Technical Branch
Science & Engineering Group
Para-Professional Engineering Series

ENGINEERING TECHNICIAN II

03/98 (TLW)

Summary

Under general supervision, perform combination of moderately difficult engineering support functions in accordance with established practices.

Typical Duties

Draft plans and specifications from sketches, diagrams, raw data and narrative verbal descriptions. Involves: reading diagram, maps, topographic and surveying data to draw drainage, grading, water and sewer lines, street layout, control points, and elevations; modifying existing plans or drawings, as authorized, to reflect changes to plans or existing conditions; field checking design plans to verify information.

Examine plans submitted for conformance to subdivision, grading, storm water management, and related codes and regulations. Involves: checking grading, drainage, cuts and fills, proposed drainage calculations and flood zone, parking lot layout and traffic plan review; issuing commercial and residential driveway and sidewalk permits; issuing demolition and foundation permits; provide quality customer service to the construction industry and the general public.

Act as instrument operator on survey crew. Involves: operating traditional surveying instruments and total station equipment; recording field data; verifying plan data and plat drawing information on-site; establishing control points, grading, drainage, street intersection data, curb or utility locations and dimensions; establishing metes and bounds lines; transcribing and transferring field survey data into permanent records; translating plan drawings to usable on-site staking, measurements and physical guide markings; may act as survey party chief in directing field crew.

Conduct regular and special on-site inspections of construction sites to ensure compliance with plans and specifications and required codes and ordinances. Involves: checking control points for street, utility and drainage requirements, and related data; investigating complaints, inquiries and discrepancies between designated design plans and actual installations by measuring, observing, gathering data on site, interviewing contractors and witnesses, compiling information and preparing reports; notifying supervisor, engineer and contractor of discrepancies between construction and plans; preparing standard cost estimates for job requests for work done by city or contractor; approving contractor cost statements and forwarding for payment; issuing Class "C" citations if necessary.

Process documents for water service application and contractor plans. Involves: verifying availability of services; maintaining and retrieving records, and conducting in-depth research to provide relevant information to individuals in unit and other departments; retrieving records and "as built" notes either in person or by phone to provide the general public and contractors with information such as existing water and sewer lines, location size and pressures; preparing service contracts, work orders and other documents, as instructed.

Perform related duties as assigned. Involves: performing any duties of supervisor, coworkers or subordinates, if required, during temporary absences sufficient to maintain continuity of normal operations; assist in training and leading subordinates and co-op students by explaining and demonstrating work to be performed; maintaining and updating computer databases; preparing reports.

Minimum Qualifications

Training and Experience: Completion of an Associate's Degree in Engineering or Drafting Technology or related field and two (2) years of increasingly responsible para-professional engineering experience; or an equivalent combination of training and experience.

Knowledge, Abilities and Skills: Good knowledge of: principles and techniques of engineering design and field surveying; mathematics related to engineering; manual and computer aided design drafting (CADD) techniques; technical principles and procedures of subdivision or building construction or improvements, or architectural design and cost estimation.

Ability to: prepare design drawings based on engineering requirements; interpret plans, drawings, specifications, codes, and regulations; gather and compile data; read and interpret construction plans and specifications in relation to controlling codes and ordinances to identify deviations from plan specifications and recognize related potential hazards; translate survey notes into maps, plans, profiles, cross-sections and legal descriptions; manually or with the aid of computer equipment draft engineering documents and perform related mathematical calculations; prepare technical reports, spreadsheets, charts and graphs pertaining to assigned activities; express oneself

clearly and concisely, both orally and in writing; establish and maintain effective working relationships with fellow employees, the general public and contractor personnel to resolve discrepancies.

Skill in the safe operation and care of: personal computer or network work station, including CADD, word processing, spreadsheets and database software; standard drafting instruments; surveying instrumentation and time and distance measuring devices; motor vehicle through city traffic.

Physical Requirements: Frequent: close visual concentration to draft design drawings; exposure to adverse weather conditions; walking, standing and climbing on rough terrain and construction sites. Occasional: stooping, bending, lifting and carrying objects and equipment (up to 30 lbs).

Special Requirements: Subject to call back, and working flexible hours, weekends, holidays and mandatory overtime, as required.

Licenses and Certificates: Texas Class "C" Driver's License or equivalent from another State.

Director of Personnel

Department Head

OFFICIAL